

10/568092

Advantageous Effects

According to the container cover as described hereinbefore, the container cover can be applied to and used with a container irrespective of the type or size of the container. Since the container cover is not disposable unlike wrap film, it does not bring resource waste or resultant environmental problem.

The container cover of the present invention can be properly used also in storing contents such as food in a refrigerator. In particular, the container cover can seal the container so that the smell of the contents cannot leak out of the container and thus reside in the refrigerator. In addition, containers having such container covers can be piped up with one above another to efficiently use the space of the refrigerator.

There is another advantage in that the container can be heated to cook or warm the contents in the container with a microwave oven.

While the present invention has been described and illustrated herein with reference to the preferred embodiments thereof, it will be apparent to those skilled in the art that various modifications and variations can be made therein without departing from the spirit and scope of the invention.

For example, in order to prevent decoloration of the closing member made of silicone by food, the closing member can be coated. Also, the cover plate is not limited to a circular configuration, but can be fabricated into various configurations such as rectangle or triangle in accordance with that of inlet of the container.

Therefore, it is intended that the present invention is not limited by the foregoing embodiments but shall be defined by the accompanying claims.

Brief Description of the Drawings

FIG. 1 is a perspective view of a container cover according to a first embodiment of the present invention;

FIG. 2 is a cross-sectional view taken along a line II-II of FIG. 1;

FIG. 3 is an exploded perspective view of FIG. 1;

FIG. 4 is a cross-sectional view of modifications to the first embodiment of the present invention;

FIG. 5 is a cross-sectional view in which the container cover according to the first embodiment of the present invention is practically applied to a container;

FIG. 6 is a cross-sectional view of a container cover according to a second embodiment of the present invention;

FIG. 7 is a cross-sectional view in which the container cover according to the second embodiment of the present invention is practically applied to a container;

FIG. 8 is a cross-sectional view of a container cover according to a third embodiment of the present invention;

FIG. 9 is a perspective view of a container cover of FIG. 8 which is partially broken; and

FIG. 10 is a cross-sectional view in which the container cover of FIG. 8 is practically applied to a container.

Best Mode for Carrying Out the Invention

Hereinafter, preferred embodiments of the present invention will be described in detail with reference to accompanying drawings.

FIG. 1 is a perspective view of a container cover according to a first embodiment of the present invention, FIG. 2 is a cross-sectional view taken along a line II-II of FIG. 1, and FIG. 3 is an exploded perspective view of FIG. 1.

As shown in the drawings, a cover plate 10 has a certain thickness, and is formed transparent so that contents contained in a container can be seen from the outside. In addition, the cover plate 10 can provide an aesthetic appearance.

The cover plate can be composed of any toxic-free material selected from a group including polycarbonate, polyethylene, polyvinyl chloride (PVC), acrylic and so on, which has excellent shock strength, high heat resistance and low temperature property. The cover plate can be composed of any material selected properly according to use so that it can be stored in a refrigerator or heated in a microwave range.

Referring to FIG. 3, a closing member 20 has an annular contact portion 22 and a fixing portion 23 integrally formed vertically along a peripheral portion of the contact portion 22. Because of the annular configuration, the contact portion 22 has a through opening 21 formed at a central portion thereof.

The fixing portion 23 is fixed to the cover plate 10 along a side end thereof, and the contact portion 22 detachably and resiliently contacts a back surface of the cover plate 10.

The closing member 20 is made of flexible and resilient material, such as silicone and so on.

Unexplained reference numeral 12 indicates an adhesive provided between the cover plate 10 and the closing member 20.

Meanwhile, as shown in FIG. 4, the fixing portion can be U-shaped so that it can be attached to the side end and the surface of the cover plate 10. Alternatively, instead of having a separate fixing portion in the closing member 20, a part of a circumference of the contact portion can be fixed along the peripheral portion of the back surface of the cover plate 10.

A method for practically adapting the container cover having the above construction to a container will be now explained with reference to FIG. 5.

FIG. 5 illustrates an embodiment of a container cover that is sized larger than a container.

Palms of both hands are placed on the peripheral portion of the cover plate 10, and four fingers except for thumbs are inserted between the contact portion 22 of the closing member 20 and the back surface of the cover plate 10 to erect the contact portion 22 of the closing member 20 from the cover plate as shown in the drawing.

Next, the cover plate 10 is placed on an inlet of the container 30 so that the erected contact portion 20 is opposed to a side surface of the container 30, and then the four fingers are retracted from the contact portion 22.

Herein, as described above, since the contact portion 22 of the closing member 20 has flexibility and resilience, it tightly clamps the side surface of the container due to its restoring force so that the container cannot slide out of the contact portion 22. At this time, when a width of the contact portion 22 is enlarged, clamping force can be magnified correspondingly.

The container can be stored or moved in this state so that contents contained therein do not leak to the outside. Also, when the container cover is removed from the container, above processes are conducted reversely.

FIG. 6 is a cross-sectional view of a container cover according to a second embodiment of the present invention, and FIG. 7 is a cross-sectional view in which the container cover according to the second embodiment of the present invention is practically applied to a container.

The cover plate 10 is fabricated with polycarbonate, polyethylene, polyvinyl chloride (PVC), or acryl and so on. The cover plate is preferably formed transparent so that contents contained in the container can be seen from the outside.

The cover plate 10 has a round 11 at its lower portion of the side end thereof so that the round 11 can contact an upper end portion of the container 30, which will be described as follows.

Referring to FIG. 6, the closing member 20 of this embodiment has a fixing portion 23 fixed to the surface of the cover plate 10 with an adhesive 12 interposed therebetween, and a contact portion 22. The contact portion 22 is integrally formed along the peripheral portion of the fixing portion 23 and bent toward the surface of the cover plate 10. Because of having an annular configuration, the closing member has a through opening 21 at a central portion of the contact portion 22.

The contact portion 22 and the fixing portion 23 can be integrally injection-molded from for example toxic-free silicone.

Hereinafter, a method for using the container cover of this embodiment will be explained with reference to FIG. 7.

The container cover is placed on an upper end portion of the container 30 in which contents are contained, and the contact portion 22 positioned on the surface of the cover plate 10 is turned inside out clockwise for 270 degrees with fingers as indicated with arrows to contact an outer surface of the container 30.

The contact portion 22 is bent at a boundary with the fixing portion 23 to tightly contact the outer surface of the container 30 so that the cover plate can strongly clamp the container 30.

This embodiment has advantages in that the adhesive 12 is applied to the surface of the cover plate 10 so that it does not directly affect contents in the container 30, and in that the contact portion 22 is turned inside out from above the outer surface of the cover plate 10 to facilitate treatment.

FIG. 8 is a cross-sectional view of a container cover according to a third embodiment of the present invention, FIG. 9 is a perspective view of a container cover of FIG. 8 which is partially broken, and FIG. 10 is a cross-sectional view in which the container cover of FIG. 8 is practically applied to a container.

The cover plate 10 is made of polycarbonate, polyethylene, polyvinyl chloride (PVC), or acryl and so on. The cover plate is preferably formed transparently so that contents contained in the container can be seen from the outside.

Referring to FIG. 9, the closing member 20 of this embodiment has a pair of fixing portions 23 and 24 fitted on a peripheral portion of the cover plate 10, and a contact portion 22. The contact portion 22 is integrally formed along the peripheral portion of the fixing portions 23 and 24 and bent toward the surface of the cover plate 10. A press protrusion 25 is formed at an end of the contact portion 22 along a circumference of a through opening 21 so as to press the outer surface of the container. The contact portion 22 and

the fixing portions 23 and 24 can be integrally injection-molded from for example toxic-free silicone to have an E-shaped cross-sectional configuration.

Hereinafter, a method for using the container cover of this embodiment will be explained with reference to FIG. 10.

5 The peripheral portion of the cover plate 10 is inserted into a space defined by the fixing portions 23 and 24 to couple the closing member 20 and the cover plate 10 with each other. Herein, if the closing member 20 is selected slightly smaller than that of the cover plate 10, stronger coupling can be obtained more reliably.

10 After the closing member 20 and the cover plate 10 are coupled with each other, the container cover is positioned on an upper end portion of the container 30, in which contents are contained, and the contact portion 22 positioned on the surface of the cover plate 10 is turned inside out clockwise for 270 degrees with fingers as indicated with arrows to contact an outer surface of the container 30.

15 Herein, the cover plate 10 has a round 11 at its lower portion of the side end thereof to resiliently contact a round of an upper end portion of the container 30 with the fixing portion 23 interposed therebetween, primarily forming a sealed state.

 The contact portion 22 is bent at a boundary with the fixing portion 23 to tightly contact the outer surface of the container 30 so that the cover plate and the container 30 coupled with each other.

20 Preferably, a ball-shaped press protrusion 25 is formed at an end of the contact portion 22 so as to securely press the outer surface of the container 30.

 According to this embodiment, there are advantages in that the adhesive is not used in comparison with other embodiments, and in that a contact portion is turned inside out exactly above the container cover in order to facilitate treatment.

Claims

1. A container cover comprising:
a cover plate having a rear surface for contacting a container; and
5 an annular closing member having a peripheral portion fixed to the cover plate along a rear peripheral portion of the cover plate and a remaining portion for detachably and resiliently contacting the rear surface of the cover plate.
2. The container cover according to claim 1, wherein the peripheral portion
10 of the closing member is extended to a side end or a surface periphery of the cover plate and fixed thereto.
3. A container cover comprising:
a cover plate having a rear surface for contacting a container; and
15 a closing member having a fixing portion fixed to the cover plate along a peripheral portion of a surface of the cover plate and an annular contact portion bent from the fixing portion toward the surface and extending integrally therefrom.
4. A container cover comprising:
20 a cover plate contacting a container at its back surface; and
a closing member having at least a pair of fixing portions fitted on the cover plate along a peripheral portion of a surface of the cover plate and an annular contact portion bent from the fixing portion toward the surface and extending integrally therefrom.
- 25 5. The container cover according to claim 3 or 4, wherein the cover plate has a round formed at a side end of the cover plate along its lower peripheral portion.
6. The container cover according to claim 3 or 4, wherein the cover plate
30 has a ball-shaped press protrusion formed at the contact portion along its end contacting the container.
7. The container cover according to any one of precedent claims 1 to 4,
wherein the closing member is made of silicone.
- 35 8. The container cover according to any one of precedent claims 1 to 4,

wherein the cover plate is made of one selected from the group consisting of polycarbonate, polyethylene, polyvinyl chloride (PVC) and acryl.

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FIG. 1

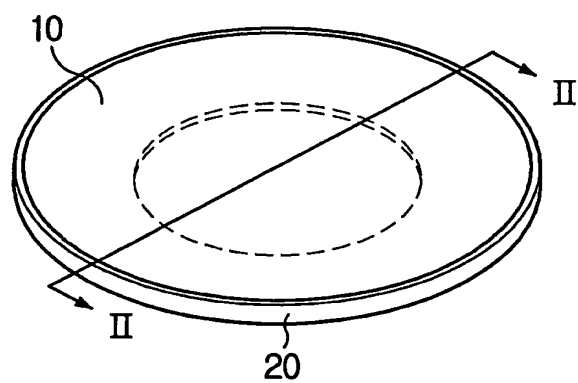
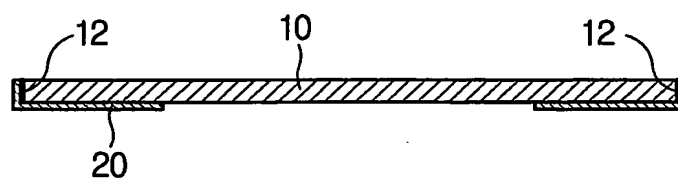


FIG. 2



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FIG. 3

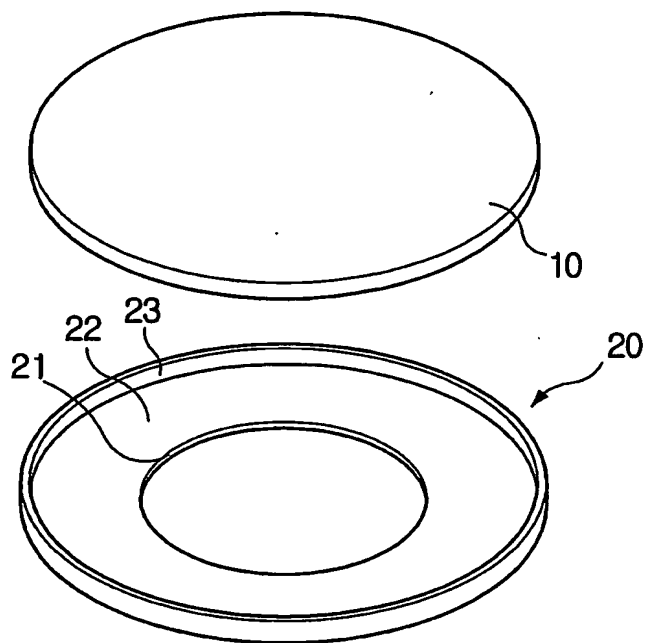
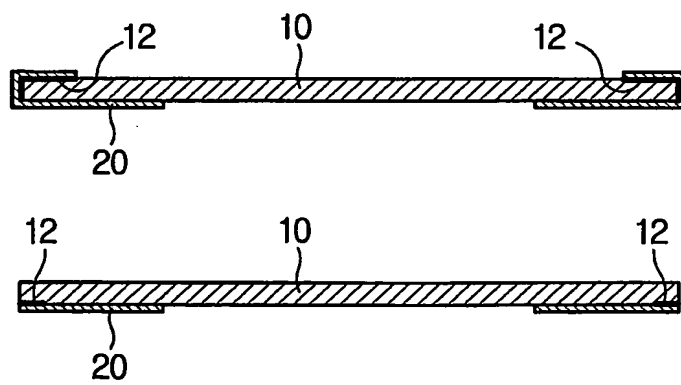
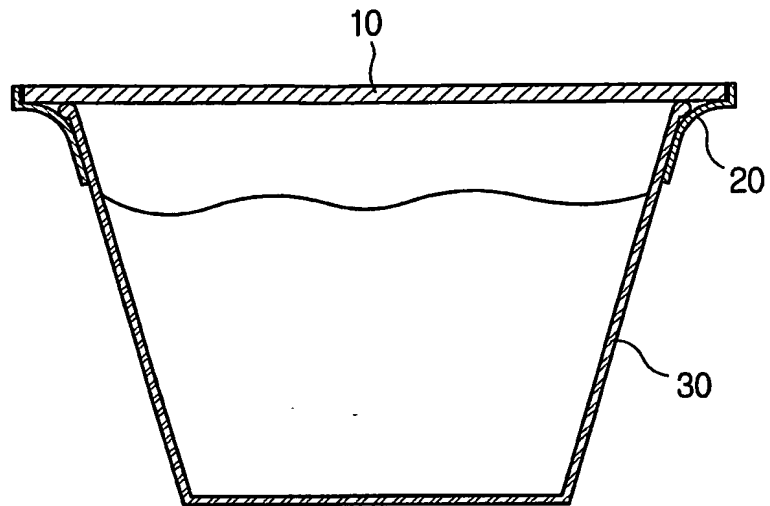


FIG. 4



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FIG. 5



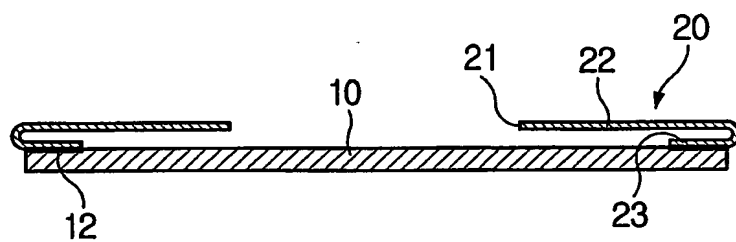
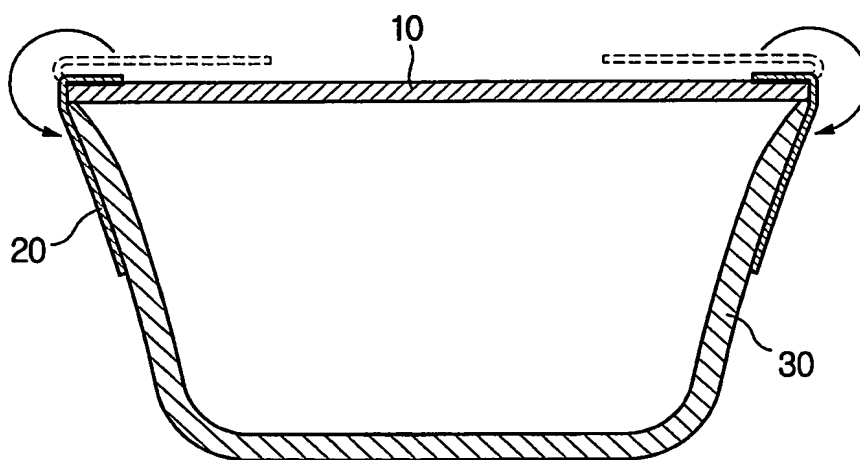
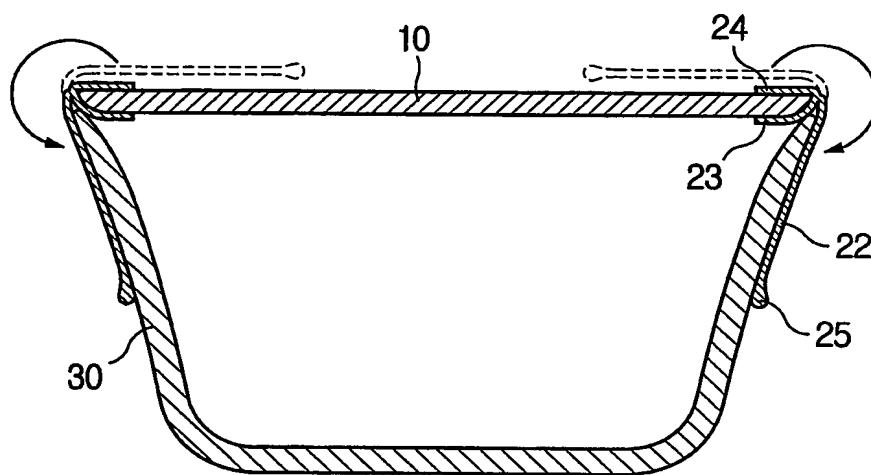
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FIG. 6

FIG. 7



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FIG. 10



PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference M04IN010PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/KR2004/002163	International filing date (<i>day/month/year</i>) 27 AUGUST 2004 (27.08.2004)	(Earliest) Priority Date (<i>day/month/year</i>) 27 AUGUST 2003 (27.08.2003)
Applicant KIM, Sang-Kee		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 3

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

- b. ☐ none of the figure is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2004/002163

A. CLASSIFICATION OF SUBJECT MATTER**IPC7 B65D 43/00**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B65D 43

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

KR : IPC Classes as above

JP Utility Model : IPC Classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

KIPO eKIPASS system

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 03-049953 U (DAKAO YUICHIRO) 15 May 1991 See abstract; Fig. 1	1 - 8
A	KR 1983-001653 U (JEONG, HAEIL) 24 October 1983 See the whole document	1 - 8
A	JP 09-221157 A (MORI NOBORU) 26 August 1997 See Fig. 1	1 - 8
A	US 5,695,086 A (CHARLES A. VIOLA) 9 december 1997 See abstract; Figs. 4-6	1 - 8
A	JP 54-034635 U (TOPPAN PRINTING CO., LTD.) 7 May 1979 See abstract; Fig. 1	1 - 8
A	JP 03-126808 U (ITO SADAMI) 20 December 1991 See abstract; Figs. 1 and 2	1 - 8
A	JP 54-013634 U (SHOSANDO) 29 January 1979 See abstract; Figs. 1 and 2	1 - 8

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

29 DECEMBER 2004 (29.12.2004)

Date of mailing of the international search report

29 DECEMBER 2004 (29.12.2004)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

CHOI, Ki Hyuk

Telephone No. 82-42-481-5894

